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**PROFessional multi-disciplinary TRAIning and Continuing
development in skills for NZEB principles**

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WHY

WHAT

HOW

Why PROF/TRAC:

barriers to NZEB construction and retrofitting

- **Mismatch between the available and needed skills** as well as managerial capacity of professionals due to a lack in specific training and education
- Many professionals in the buildings sector have only **limited training and skills** in energy efficient building design and nZEB principles.
- **Collaboration** between the different disciplines and building professionals is still **not very common**.
- The involved building professionals are lacking the right information on available qualifications and training materials.
- There are **no mappings** and qualifications available **of the needed skills** for the specific target groups. Most of the trainings available focus on one specific target group and on one technique or concept.
- **Training materials** for education and post-initial education are now created **on an ad-hoc basis** without consensus on an underlying qualification framework.
- **Training materials** for education and post-initial education are available but **should be maintained and updated** in order to make the training sustainable and suitable for a life- long- learning process

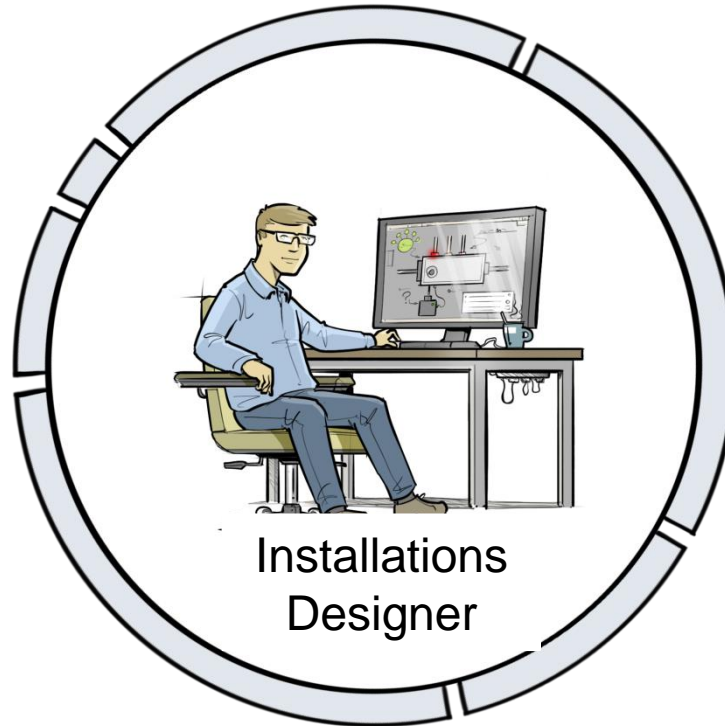


WHY



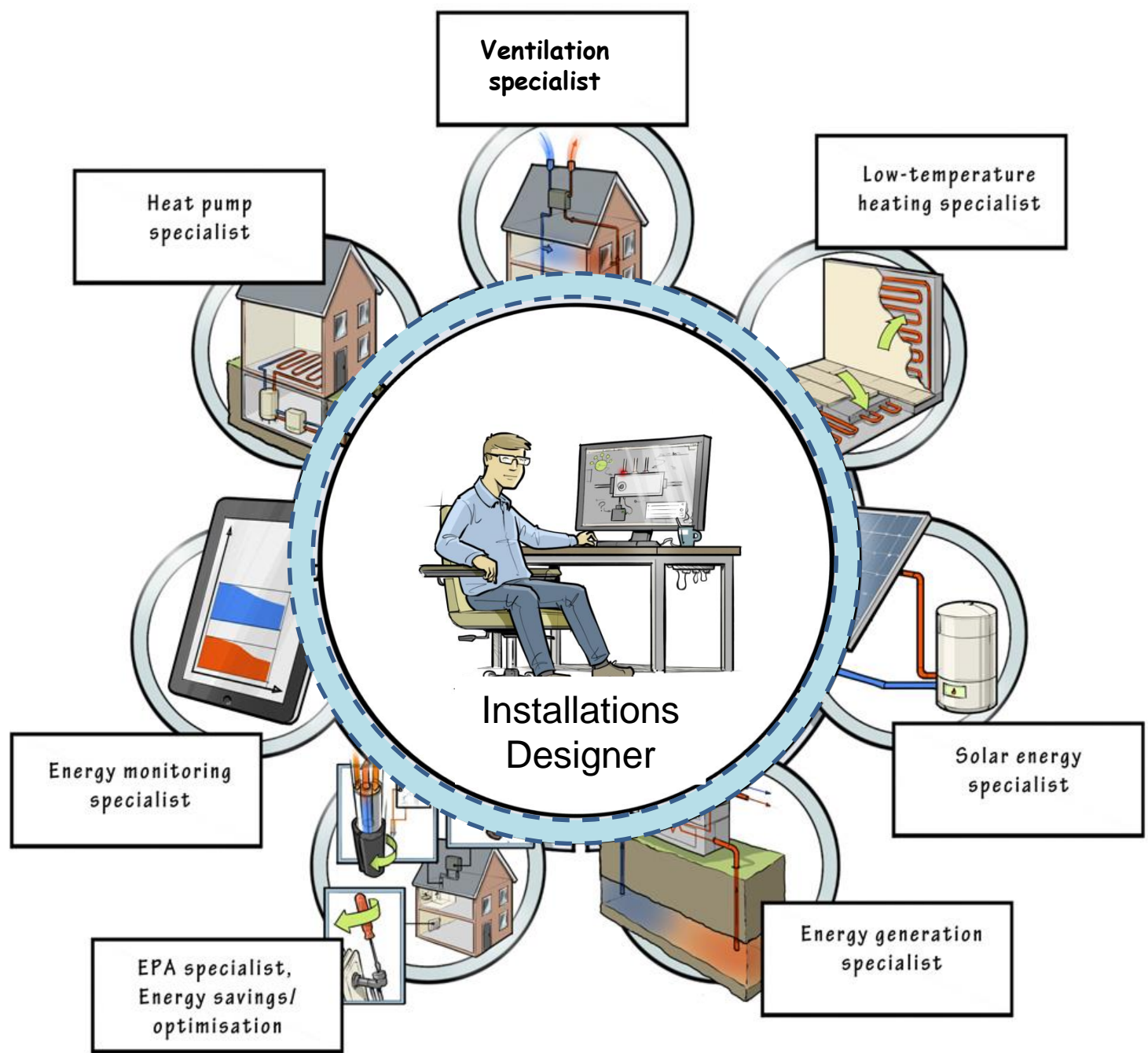
WHAT

HOW



Installations
Designer





WHY

WHAT

HOW



PROF/TRAC skills mapping



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Skills Mapping methodology

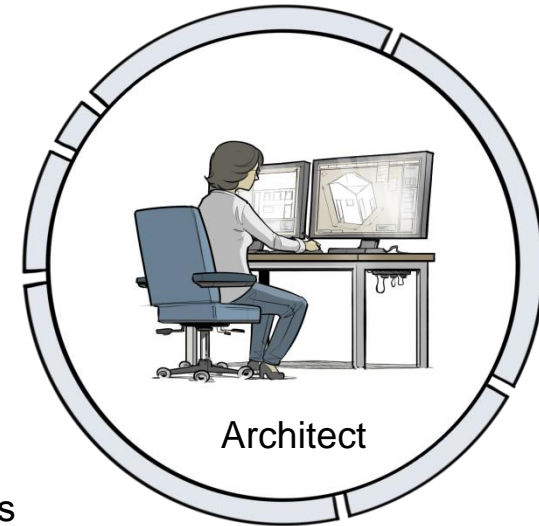


1. Creating an inventory of involved professions, number of professionals and their education levels
2. Creating an inventory of existing qualifications
3. Creating an inventory of available education programmes
4. Creating an inventory of post-initial trainings
5. Creating an inventory of accreditation and certification structures
6. Creating an inventory of applied building and installation technologies



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7. Mapping the applied building and installation technologies with the involved professions and their EQF-levels
8. Creating an overview of required interdisciplinary skills
9. Using the results of actions 7 and 8 to categorize existing qualifications, post-initial trainings and education programmes
10. Based on estimates of volumes in the building sector estimates of the number of professionals required are made
11. Visualise the generic occupations with an occupation image.

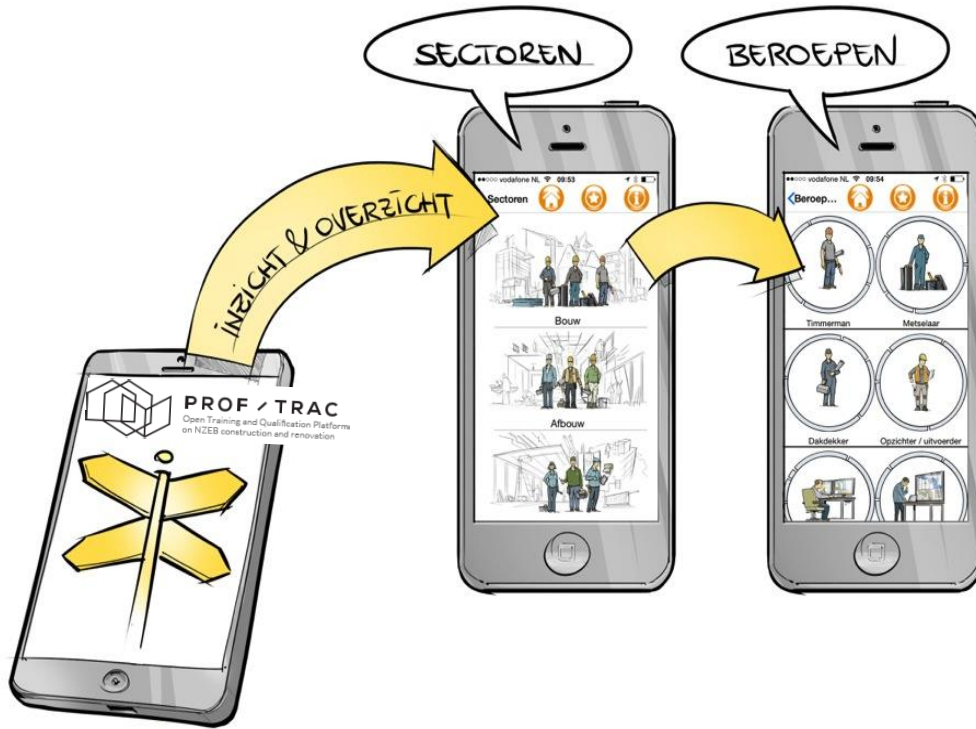


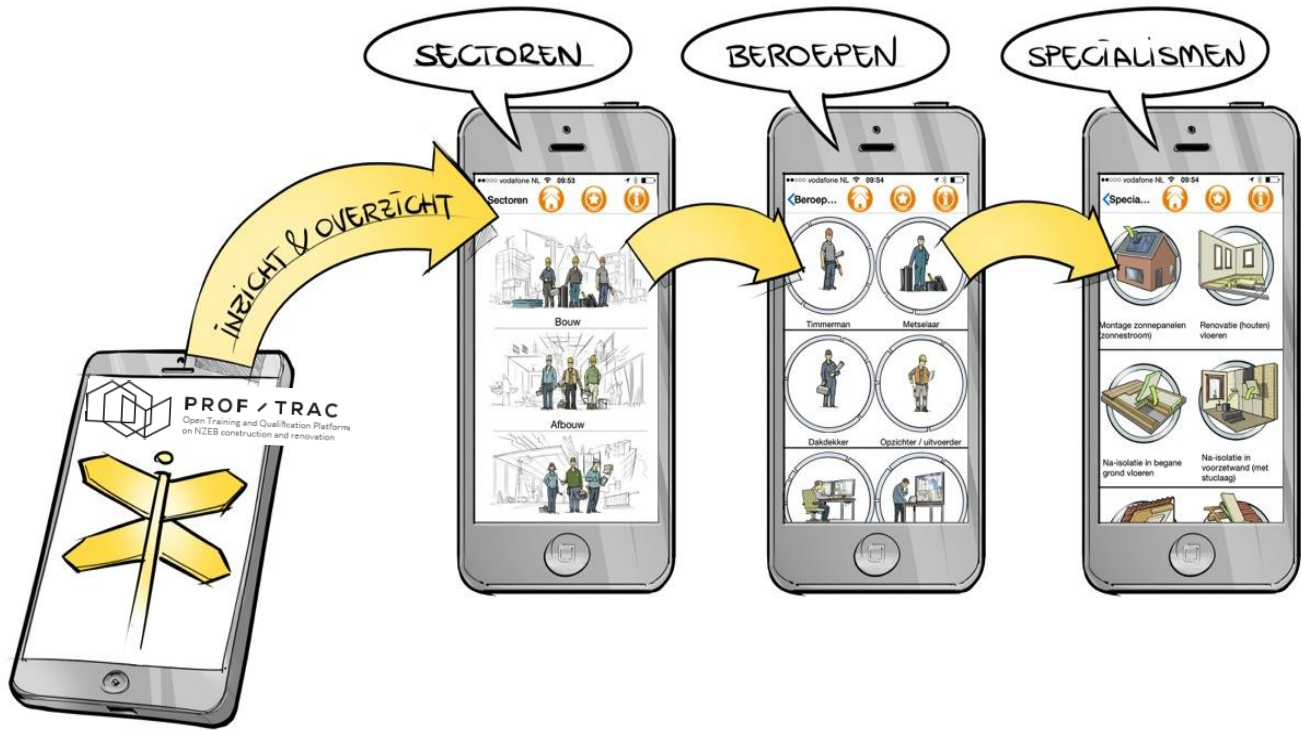
One of the
results

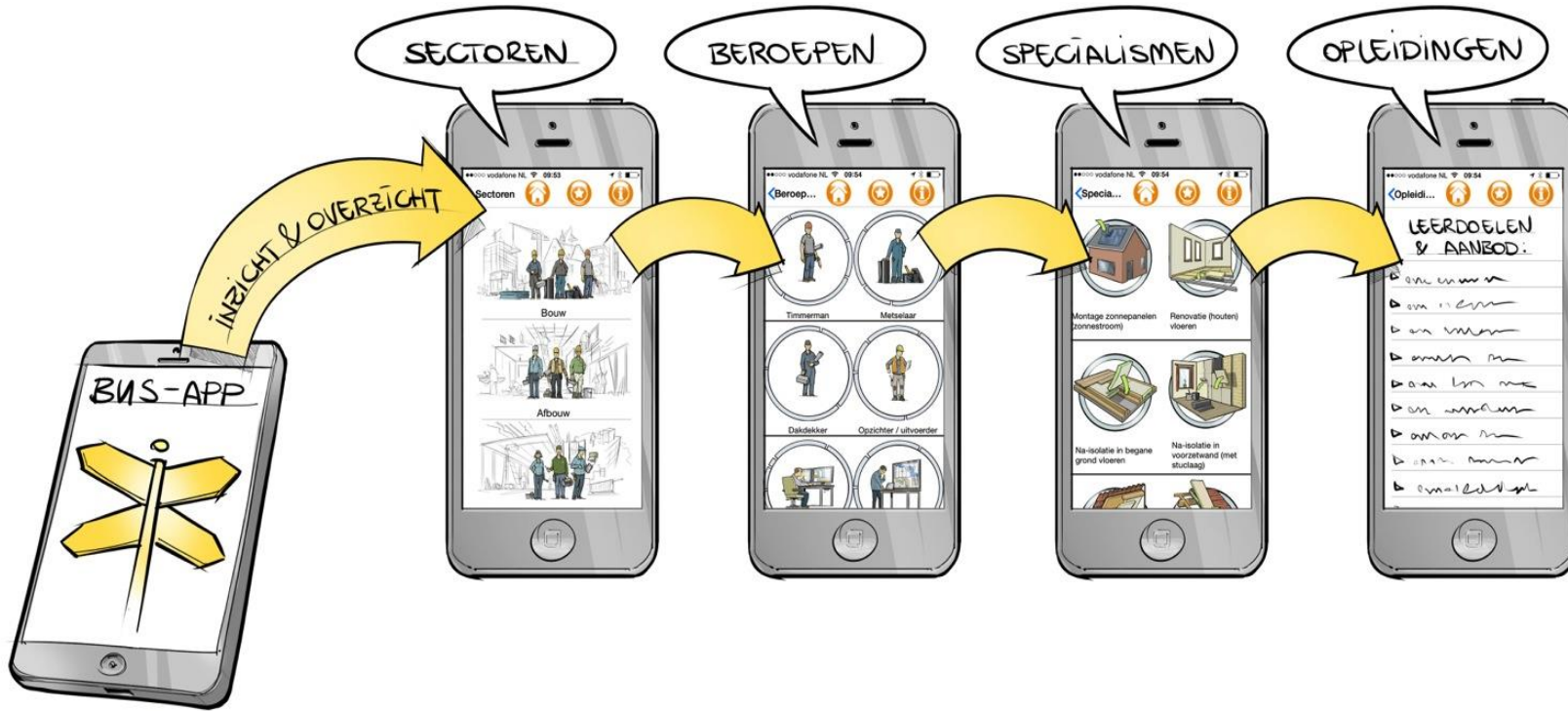


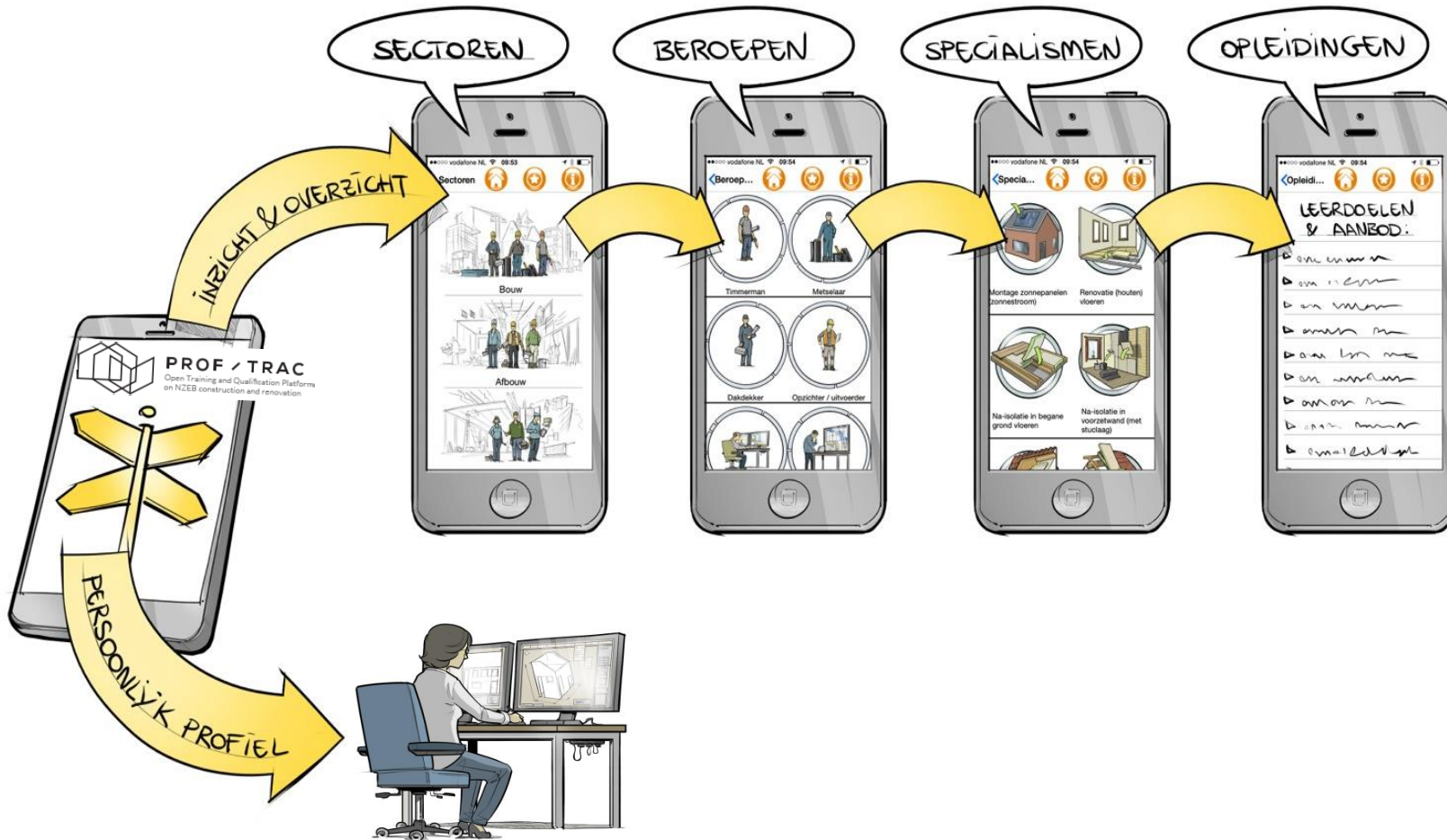


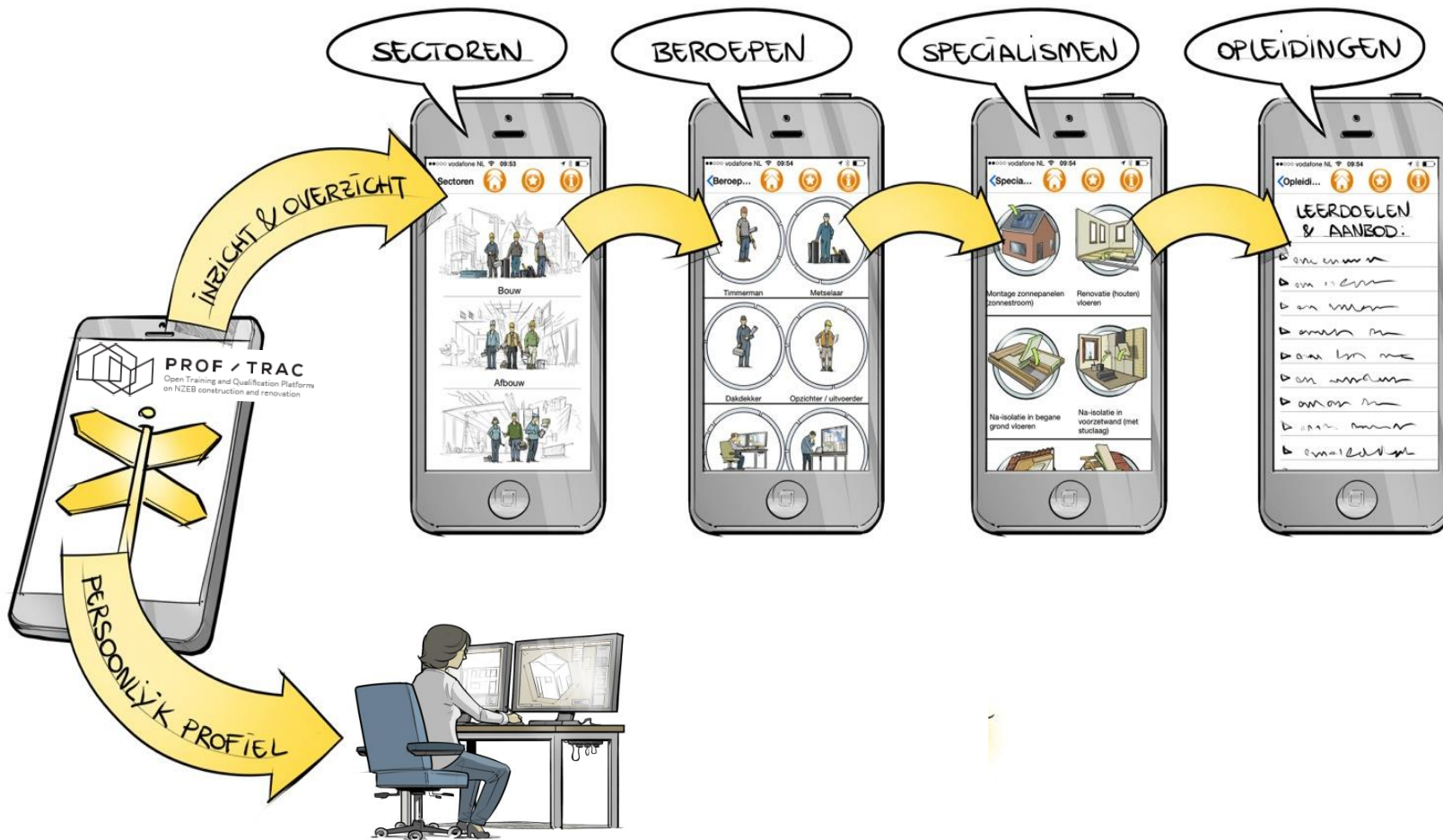


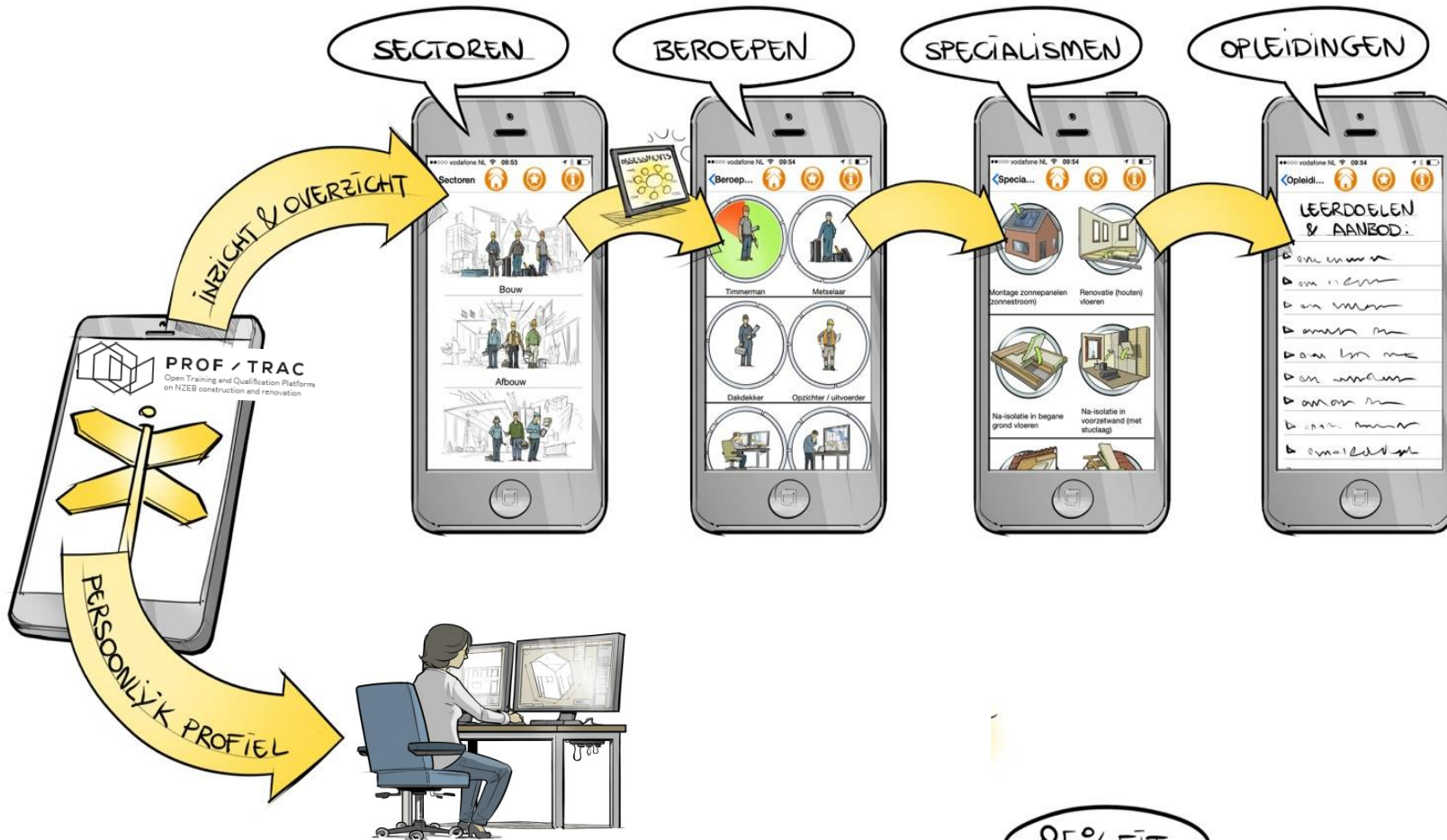


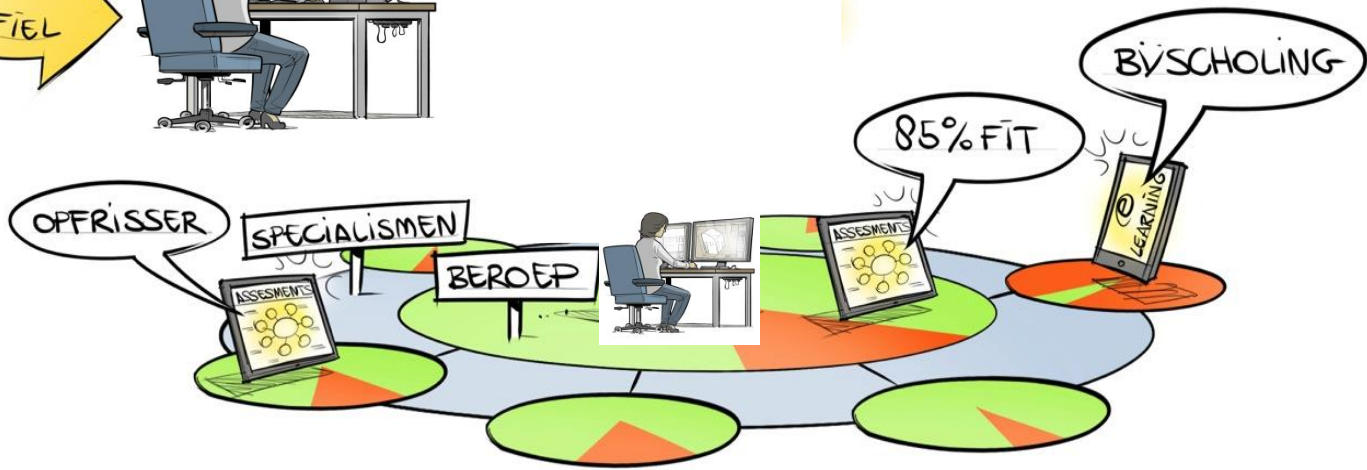
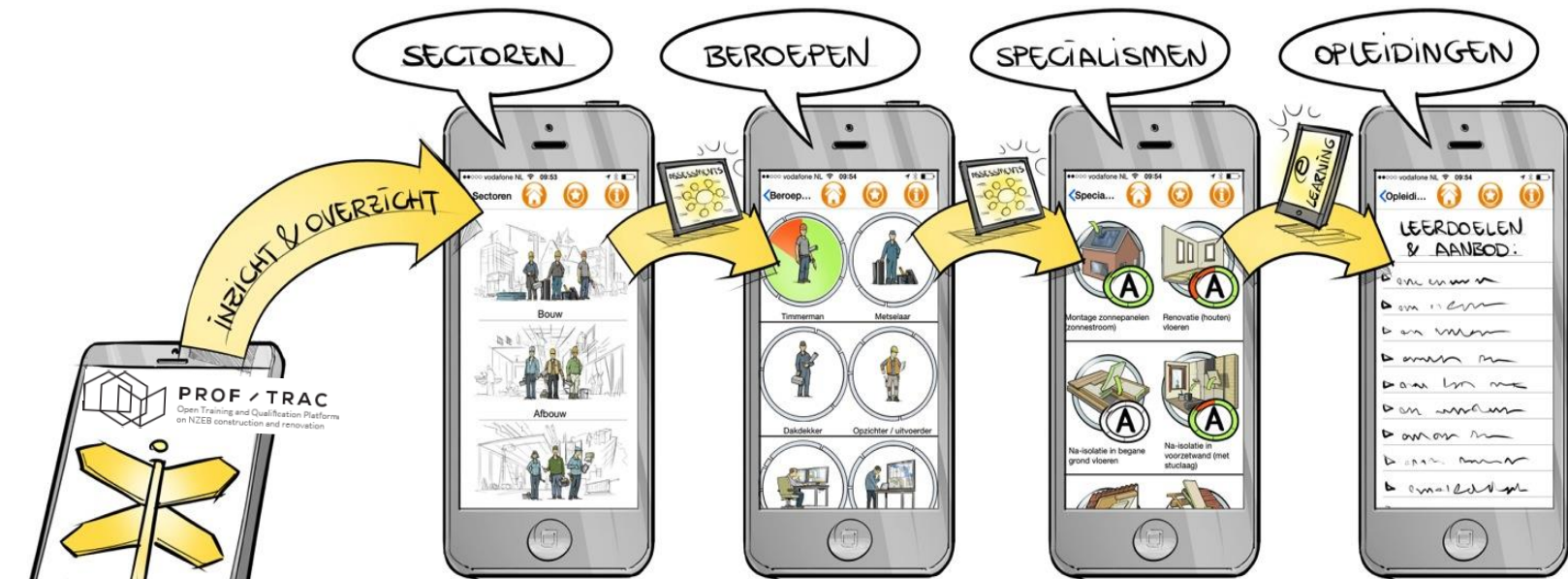












PROF/TRAC Database



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	PROJECT	TARGET GROUP
New Buildings	EDUCATE	Architectural education (only students)
	MaTriD	Client – architect – engineer
	ZEB	(Client) - Architect – engineer
	IEE INTEND	Investor/Client – architect – engineer
	IDES-EDU	Students and professionals from building sector (constructors, real estate developers, architects, suppliers, consultants) and accrediting bodies.
	neZEH	Renovation of hotels: professionals involved
	STREAMER	Hospitals: architect – engineer
Residential buildings	COHERENO	Single-family houses, renovation, professionals involved
	TRAINREBUILD	Renovation Property owners, owner associations and local authorities
Social Housing	SHELTER	Renovation of social housing
	POWERHOUSE	Social housing practitioners – full spectrum of users
	AFTERPROJECT	Social Housing Client-architect-engineer in the end phas



Categorization of projects according to involved professions

Project	Building type	User awareness			Authority awareness/Predesign	Financial manager	IED				Constructi on	Use and maintenance
		Building owner	Owner Association	SH owner	Local authority responsible		Owner	Architect	Engineer	Procurer	Procurer	Building manager
EDUCATE	All				[X]			X				
MaTriD	New						X	X	X			
ZEB	New							X	X			
INTEND	New						X	X	X	X		
IDES-EDU	New					X	X	X	X	X		
TRB	Renovation residential	X	X	X	X							
SHELTER	Renovation SH			X	X	X	X					
POWER HOUSE	SH	X	X	X	X	X	X	X	X	X	X	X
AFTER PROJECT	SH						[X]	[X]	[X]	[X]	[X]	X
neZEH	Hotels/renovation					X	X	X	X	X		
COHERENO	Single-family renovation	X			X	X		[X]	[X]			
Streamer	Hospitals							X	X			



Categorization of projects according to building phase

	Strategy development phase	Pre-design phase	IED phase	Construction phase	Use phase	Maintenance and repair phase
EDUCATE			EDUCATE			
MaTriD		MaTriD	MaTriD			
ZEB		ZEB	ZEB			
INTEND		INTEND	INTEND	INTEND		
IDES-EDU	[IDES-EDU- financial schemas]	IDES-EDU	IDES-EDU	IDES-EDU		
TRB	TRB					
SHELTER	[SHELTER- financial schemas]					
POWER HOUSE	PH	PH	PH	PH		PH
AFTER PROJECT			(AFTER)	(AFTER)	AFTER	AFTER
neZEH			neZEH	(neZEH)		
COHERENO	COHERENO	COHERENO				
STREAMER			STREAMER			



Key words structure

Profession	Code	Topic(T)	Subtopic	Code	Type of project	Code	Building use	Code	Type of the material	Code	Language	Code	
Architect	P1	Energy management		EM	New construction	E1	Office buildings	B1	PPT	M1	Danish	L1	
Engineer	P2		Smart grid systems	EM1	Renovation	E2	Apartment houses	B2	Lecture notes	M2	Dutch	L2	
Project manager	P3		Domotic systems	EM2			Single-family houses	B3	Reports/publications	M3	English	L3	
Project developer	P4		Building management systems	EM3			Educational building	B4	Video tutorials	M4	French	L4	
Building manager	P5	Energy production		EP			Other	B5	Workshops	M5	German	L5	
Building owner	P6		Geothermal energy	EP1			Hospitals	B6	Guidelines/Toolkits	M6	Italian	L6	
Financial manager	P7		Biomass	EP2			Wholesale and retail	B7	Software	M7	Spanish	L7	
Procurer	P8		Biogass	EP3			Sport facilities	B8	Case studies	M8	Bulgarian	L8	
PROF-TRAC trainer	P9		District heating and cooling	EP4					Databases/resources	M9	Croatian	L9	
			Heatpumps	EP5					MOOCs	M10	Czech	L10	
			Solar power systems for electricity generation	EP6								Estonian	L11
			Solar thermal systems for cooling generation	EP7								Finnish	L12
			Solar thermal systems for domestic hot water and/or heating generation)	EP8								German	L13
			Mini wind power	EP9								Greek	L14
		Combined Heat and Power (CHP)	EP10								Hungarian	L15	
		Energy reduction		ER							Irish	L16	
			Insulation	ER1								Latvian	L17
			Air tightness building	ER2								Lithuanian	L18
			Micro climates	ER3								Maltese	L19
			Envelope systems	ER4								Polish	L20
			Hot water systems	ER5								Portuguese	L21
			Window and/or glazing systems	ER6								Romanian	L22
			Heating and cooling emission systems	ER7								Serbian	L23
			Electric heating systems	ER8								Slovak	L24
			Artificial lighting systems	ER9								Slovenian	L25
		Ventilation systems	ER10								Spanish	L26	
		Interdisciplinary skills		IS							Swedish	L27	



PROF/TRAC database



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Select topic ▼

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Building use
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Type of material
Select one... ▼

Language
Select one... ▼

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Relevant report	Topic	Project	
The Comfort Houses: Measurements And Analysis Of The Indoor Environment And Energy Consumption In 8 Passive Houses 2008-2011	Energy reduction	ZEB	More details
Energineutralt Byggeri – Definition og fremtidig rolle i samfundet	Energy management	ZEB	More details
Energineutralt Byggeri – Designprincipper og byggede eksempler for enfamiliehuse	Energy management	ZEB	More details
Energineutralt Byggeri – Tekniske løsninger	Energy management	ZEB	More details
Zero Energy Buildings – DESIGN PRINCIPLES AND BUILT EXAMPLES	Energy management	ZEB	More details
Survey Findings Report	Awareness of energy efficiency	TRB	More details
Final conclusions report	Awareness of energy efficiency	TRB	More details



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